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### BIRCH BARK MS.

Dr. A. F. Rudolf Hoernle again exhibited the old birch bark MS., brought by Lieut. Bower from Kashgaria, and made the following remarks concerning it :

“This MS. was first shown to the Society in November last, in the Proceedings of which month an account of its acquisition by Lieut. Bower is printed. That account appears to have been reprinted in the *Bombay Gazette*, a copy of which accidentally fell into my hands in Aden on my way out to India in March last. It was the first notice I had of it; Major Cumberland, whose companion Lieut. Bower had been on his travels, was a fellow-passenger of mine and gave me corroborative information; all this made me very anxious to see the MS. On my reaching Calcutta I was very glad to find that the MS. was still in the possession of Colonel Waterhouse, who very kindly at once made it over to me for examination.

“The MS. has been with me only a little more than a week, and my examination of it, of course, is not yet finished; but I have already been able to determine several important points; and as hitherto it has been impossible to ascertain anything about the character and contents of the manuscript, I will not delay communicating my information, though further examination may possibly induce me to modify it on some minor points.

“The first point that strikes one on looking through the MS. is, that it appears to be written in three, if not four, different styles. This point has been already noticed in the November account. But what is more,—the difference is not (as may seem at first sight) merely one of careful and slovenly writing, but one of variety of alphabet. The whole manuscript is written in what Mr. Fleet (in his *Gupta Inscriptions* in Volume III of the *Corpus Inscriptionum Indicarum*, p. 3) distinguishes as the Northern class of the Nágari alphabet, which is characterised by the peculiar form of the *m*. Of this class, however, three varieties are observable in the MS. The test-letter of these varieties is the palatal *ś*, which is formed in three different ways. The first of them, with a rounded top, is that commonly used in the Northern Gupta inscriptions; the other two closely approach the form

of the palatal *ś* in the *Sáradá* alphabet of Kashmir. The first variety of writing is shown in the upper portion of Plate VI published in the November Proceedings; and the third variety in the lower portion. Of the second variety—one of great neatness—a specimen is now figured in the lower part of Plate I, which accompanies this account. The upper part of this plate gives another specimen of the first variety. The three varieties have no reference to difference of age, but merely indicate difference of locality. The second and third varieties, as shown by their approach to the *Sáradá* characters, were probably current in the extreme North-West of the great area of the Northern class of alphabets, while the first variety was used in the remainder of that area.

“On examining more closely the several leaves, I noticed that they were evidently mixed up. The leaves written in the different hands followed one another without any order. But I also noticed that many of the leaves were marked with numbers on their left hand margin. Accordingly I cut the string which passed through them and held them together, and arranged them in their proper order, as indicated by their numbers. It then was seen, that 33 leaves, forming the main portion of the MS., followed in consecutive order, and that these 33 leaves were written throughout in the first variety of the alphabet. This variety extended to the obverse of the 33rd leaf; but on the reverse of that leaf commenced the second variety, and went on over five leaves. The remainder of the leaves were written in the third variety.

“It further seemed that the three varieties of writing distinguished three different works, the reasons of which I shall explain presently.

“I now took up the main portion (of 33 leaves), and deciphering the first page of the first leaf, discovered that it contained an introduction, giving the name of the work and detailing its contents. The work is a compendium of medicine, is named the *Návanítaka*, and consists of sixteen chapters (*adhya*). That it was written\* by a Buddhist, is seen from the initiatory salutation of the “*Tathágatás*” or Buddhas. But I have not yet succeeded in tracing anywhere the name of its author.

“The following is a transcript and translation of the introduction. It is written in Sanskrit verse (*śloka*). In fact the contents of the whole MS. appear to be composed in *ślokas*.”

\* The form of salutation varies according to the creed of the writer of a MS. The present salutation is, therefore, not strictly evidence as to the creed of the author of the work, but only as to that of the scribe of the MS.

(line 1) नमस्तथागतेभ्यः ।

प्राक्प्रणीतैर्महर्षीणां योगमुख्यैस्समन्वितम् [1]

वक्ष्ये हं सिद्धसंकर्षं नाम्ना वै नावनीतकम् ॥ [१॥]

(line 2) नाना व्याधिपरीतानां नृणां (\*स्त्रीणां)श्च यद्धितम् [1]

कुमाराणां हितं यच्च तत्सर्वमिह वक्ष्यते ॥

समासरतबुद्धीनां भिषजां प्रीतिवर्द्धनम् [1]

योगवाङ्मयतश्चापि विस्तरञ्जं मनोनुगम् ॥ [१॥]

अध्यायं चूर्णयोगानां प्रथमं चात्र (line 3) वक्ष्यते [1]

द्वितीयं घृतपानानां तृतीयं तैलसञ्चितम् ॥ [३॥]

चतुर्थं मिश्रकं नाम नानाव्याधिचिकित्सितम् [1]

पञ्चमं वस्त्रियोगानां रसायनविधानतः ॥ [४॥] †

(line 4) सप्तमं च यवागूनां दृष्यमष्टममुच्यते [1]

नेत्रांजनानां नवमं दशमं केशरञ्जनम् ॥ [५॥]

अभयाकल्पनामाख्यमत्रैकादशमुच्यते [1]

द्वादशं स्याच्छैलजतोस्त्रिंशत् (line 5) कस्य त्रयोदशम् ॥ [६॥]

कुमारभृत्यमप्यत्र स्याच्चातुर्दशम् [1]

वन्ध्याचिकित्सिताख्यं च त्रयोदशं बुधैः ॥ [७॥]

सुभगाचिकित्सिताख्यं च तथा षोडशकं मतम् [1]

इत्येते षोड (line 6) शाङ्खाया विज्ञेया नावनीतकम् ॥ [८॥]

नेदं दद्यादपुत्राय न चाभ्रात्रे कथञ्चन [1]

अशिष्ये प्रसवो न स्यात्कर्त्तव्य इति मे मतिः ॥ [९॥]

\* Conjectural; the leaf is here defective showing only portions of letters.

† There is here a difficulty about the sixth chapter. As the *rasāyana* are a distinct subject from the *vasti*, it seems clear that the word *rasāyana-vidhānataḥ* refers to the sixth chapter. The text may be corrupt, and should probably be read *rasāyana-vidhā tataḥ* i. e., 'next the rules about elixirs,' or perhaps *rasāyana-vidhis = tataḥ*, the word *tataḥ* indicating the sixth chapter.

‡ The two *aksharas* दश are omitted in the MS.

1 n  
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*Translation.\**

‘Salutation to the Tathágatas.—I am going to write an approved compendium (of medicine), called the Návánítaka, based on the excellent system of the Maharshis as composed by them in olden times. Whatever is useful to men and women afflicted with various diseases; whatever is also useful for children, that will all be declared in this book. It will commend itself to those physicians whose minds delight in conciseness; but on account of the multiplicity of its prescriptions, it will also be welcome to those whose minds love many details.

‘The first chapter will give prescriptions of powders; the second of clarified butter; the third will be concerned with oils. The fourth will be about the mixtures which are used in the treatment of various diseases. The fifth will give prescriptions of clysters, the sixth rules about elixirs. The seventh will be about gruels, the eighth about aphrodisiacs, the ninth about eyewashes, the tenth about hair-dyes. The eleventh will be concerned with applications of the yellow myrobalan.† The twelfth will be about bitumen, the thirteenth about castor-oil. The fourteenth will be concerned with the treatment of children; the fifteenth will deal with the treatment of barren women. Lastly the sixteenth will be about the treatment of women who have children. These sixteen chapters will constitute the Návánítaka. It should not be given to any one who has no son, nor to any one who has no brother; nor should it be taught to any one who has no disciple.’

“After this commences the first chapter on the *chúrṇas* or powders; it extends down to the obverse of the fourth leaf, where its end is indicated by the words *नावनीतके चूर्णयोगास्तुमाप्ताः । प्रथमोऽध्यायस्तुमाप्तः ।* *i. e.*, ‘in the Návánítaka the prescriptions of powders are finished; the first chapter is finished.’ The following are some of the names of the powders that I have noticed: *varddhamánaka*, *shadyádika*, *tiktaka*, *vṛisha-dvádaśaka*, *arishṭa*, etc.

“The second chapter on clarified butter extends to the obverse of the ninth leaf, where we find the remark *द्वितीयोऽध्यायः । वलानैलं प्रवक्ष्यामि वातरोगविवर्हेणम् ।* *i. e.*, ‘(here ends) the second chapter; I shall (now) explain the Valá oil, the cure for rheumatism.’ The following are some of the names of clarified butter; after each name the number of ślokas about it are given: thus *amṛita-práśa* with 10 ślokas, *kalyáṇaka* with 4, *tiktaka* with 4, *mahátiktaka* with 7, *mṛidvíka* with 3, *máyuṛa* with 7, etc.

\* The translation is tentative. Some of the medical terms are not known to me, nor to those Kavirájs whom I consulted.

† *Abhayá*, I am told by a Kaviráj, is a synonym of *harítukí*. See also Glossary to the Bibliotheca Indica edition of the *Aśva Vaidyaka*.

“The third chapter on oils extends to the obverse of the thirteenth leaf, where it ends thus: नावनीतके सिद्धसङ्कर्षे तैलपक्वत्ततीयो ऽध्यायः । अतः परं प्रकीर्णकयोगान्वच्छ्यामः, *i. e.*, ‘(here ends) the third chapter on oils in the approved compendium Návanítaka; in the following we shall declare miscellaneous prescriptions.’ The following are some of the kinds of oil spoken of: *valá* oil in 16 ślokas, *amṛita* oil in 25 ślokas, *aśvagandhá* oil, etc.

“The fourth chapter on mixtures or miscellaneous prescriptions ends on the obverse of the seventeenth leaf, with the words: इति नावनीतके मिश्रको ऽध्यायश्चतुर्थः । अतः परं प्रवक्ष्यामि वल्लवर्णप्रसादकम् येन हंसा निवर्द्धन्ते वलं चैवोपजायन्ते । *i. e.*, ‘here (ends) the fourth chapter in the Návanítaka, (called) *Míśraka*; in the sequel I am going to declare means of improving vigour and colour, by which good spirits are increased and vigour also is generated.’ Of this chapter I may give the following verses as a specimen:—

भृष्टान्भृष्टान्खिलान्सम्यक्क्षीरे निर्व्वाप्य पीषयेत् ।

वातरक्तप्रदेहसैस्त्रिलैर्व्वा मधुकाश्रितैः ॥ [१ ॥]

शसः प्रलेपः सद्यतैश्चगलीक्षीरगोधूमैः ।

वातरक्तहरं ज्ञेयं प्रधानमिदमौषधम् ॥ [२ ॥]

वातशोणितप्रशमनं योगद्वयं स्त्रो २ ॥

सर्पिसैलं गुडं शुक्तं पञ्चमं विश्वभेषजं ।

पीतमेतद्भवेत्सद्यस्सर्पणं त्रिकशूलनत् ॥

चित्रकं पिप्पलीमूलं वचा कटुकरोहिणी ।

पाठा वल्लकवीजश्च हरीतक्या महौषधम् ॥

*i. e.* (1) ‘Let thoroughly parched sesamum seed, well sprinkled into thickened milk, be pressed to consistency; or with the same sesamum seed mixed with liquorice a plaster may be made for rheumatism.

(2) Thickened goat’s milk and (flour of) wheat with clarified butter makes an excellent ointment. This may be considered the principal remedy against rheumatism (or gout).

The above are two prescriptions for the curing of rheumatism.

(1) Clarified butter, oil, treacle, vinegar, and, as the fifth, ginger; these, when drunk, are an instant remedy against pains in the lower part of the spine (*i. e.*, against lumbago).

(2) Castor-oil, the root of long pepper, the *vachá*-root, the *Helleborus niger*, the *Stephania Hernandezifolia*, and the seed of *Holarrhena Antidysenterica* and *chebulic myrobolan* are a grand remedy.’

“ From the fourth chapter onwards I have not yet been able fully to trace the remaining chapters. On the 24th and 25th leaves I have noticed several names of gruels or *yavágú*, which belong to the seventh chapter.

“ On the obverse of the 28th leaf I have noticed the ending of the 8th chapter, thus नावनौतके सिद्धसंकर्षे नानाचार्यमते दृषयोगाः समाप्ताः । *i. e.*, ‘ here end the prescriptions of Aphrodisiacs (as set forth) in the approved compendium *Návanítaka* according to the doctrine of various *Ācháryas*.’

“ On a subsequent leaf I have noticed portions of the eleventh chapter; and on another the beginnings of the twelfth and thirteenth chapters : thus अथातः शिलाजतुकल्पं व्याख्यास्यामः and अथातस्त्रिचककल्पं व्याख्यामः । *i. e.* ‘ here we shall explain the application of bitumen’ and ‘ here we explain the application of castor-oil.’

“ So far as I can judge for the present, the MS. does not seem to be complete ; though I cannot say whether much or little of it is lost.

“ As I explained before, this medical work ends on the obverse of a certain leaf ; and on the reverse of that leaf commences what appears to be a different work written in the second variety of the alphabet. At the bottom of the obverse of this leaf, marking apparently the end of the medical work, there is a line of writing, in the third variety of the alphabet. It runs thus इत्यत्र श्वेते श्वेतस्याधिपत्ये शतस्याधिकरणे स्वाहा । This would seem to have been added to the MS. by the scribe who wrote the third portion of the MS. I do not understand its meaning.

“ The beginning of the second portion of the MS., which commences on the reverse of the leaf just referred to, runs thus :—

नमो नन्दिरुद्रेश्वराय—नमो आचार्येभ्यः—नमो ईश्वराय—नमो माण्डिभद्राय(?)—नमस्सुर्व-  
यन्त्र...\*—नमस्सुर्वदेवेभ्यः शिवाय नमः षष्ठीये नमः प्रजापतये नमः रुद्राय नमः नमो  
वैश्रवणाय नमो भरतानां नमः etc.

“ The following is a specimen of the contents of this part of the manuscript. See Plate I, No. II, end of first line.

परिह्रियते ते बुद्धिः..... †

(line 2) आरम्भश्चिन्तितो यस्ते निष्फलः स भविष्यति ॥ शापटः ४ ४ ३

व्याधिभिर्म्मोक्ष्यसे क्षिप्रं सुखं वा प्राप्स्यसे तथा ।

नात्युच्चं नातिनीचं च फलमासादयिष्यसि— ॥ द्वितीयशापटः ॥ (line 3) [ ४ ३ ४ ]

\* The dots signify illegible *aksharas*.

† The other half of the śloka is broken away and lost.



आयसो दृश्यते घोरो वेभ्यश्च तव विग्रहः ।

निष्फलं दृश्यते कार्यं प्रच्छेद्यस्य कारण—॥ तृतीयशापटः ॥ २४४

“ This may be thus translated :

‘1, Thy intelligence is spoiled, ..... Whatever undertaking thou thinkest of, that will be fruitless.

‘2, From diseases thou shalt quickly be delivered ; and happiness thou shalt obtain ; and a result thou shalt enjoy, neither very great nor very small.

‘3, Fearful is sure to be the exertion with those, with whom thou hast a quarrel ; fruitless is sure to be the business of which thou askest the causes.’

“ The whole consists of similar proverbial sayings divided in sets. Thus besides the above three *śāpaṭa*, there are three *māli*, five *bahula*, three *kūṭa*, four *bhadra*, six *śakti*, six *dundubhi*, three *vṛisha*, three *preśhyā*, three *viṭi*, three *karṇṇa*, three *sajā*, three *kūṇa*, three *chunchuṇa*, three *pañjī* or *pāñjī*, etc. What these terms may mean I do not know.

“ The system of enumeration, however, is curious and noteworthy. The three *śāpaṭa* are indicated by varying the relative position of three numbers : 443, 434, 344. Similarly the six *śakti* are enumerated by the variations of 341 = first, 134 = second, 413 = third, 314 = fourth, 143 = fifth, 431 = sixth.

“ I may here note that the numbers are indicated, through all the three portions of the MS., not by means of numeral figures, but numeral letters. Nor is the modern decimal system of notation used, but the older one which indicated the tens, hundreds, etc. by separate sigus ; thus 16 is expressed by the symbols for 10 and 6, 25 by those for 20 and 5, etc.

“ Regarding the third portion of the MS., I can say, for the present but little. It is written in a third variety of the alphabet. It appears to contain charms or prayers, and to be of small interest. But I have not yet been able to examine it more closely. A specimen of it is given in the lower portion of the plate which accompanies the account in the November Proceedings. That specimen reads thus :

line 1, दुन्दुभौ - गर्जनी - वर्षणी - स्फोटनी - पतनी - पाचनी - चारिणी - कंपनी -  
मदनौ(?) . . . . . \*

line 2, मे - गोलायाः परिवेलाय वर्षतु देवो समंतेन - इति किसि खडा (read  
खाडा ?) । मैत्री मे धितराद्रेपु (read धृत ० ?) मैत्री नैरा-

\* The dots signify illegible *aksharas*.

line 3, वणेषु च - विरूपाक्षेषु मे मैत्री कृष्णगीतमकेषु च - मणिना नागराज्ञा मे मैत्री वासुकीना-

line 4, मपि - दण्डपादेषु येषु\* पूर्वभद्रेषु च सदा - नन्दोपनन्दो ये नागा वर्षवन्तो यशस्विनः देवा-

line 5, सुरं पि संग्राममनुभवन्ति महर्षिका - अनवतप्तेन वरुणेन मैत्री संहारकेन च - तच्छकेन अन्तेन

line 6, तथा वासुमुखेन च - अपराजितेन मे मैत्री मैत्री च्छिवसुतेन च - महामन-  
स्विना नित्यं तथैव च

i. e., 'may God rain all over my territory; hail to Ilikisi; my loving trust is in Dhṛitarāshṭra; my loving trust is in Nairāvāṇa (Airāvāṇa ?); in Virūpāksha is my loving trust and in Kṛishṇa Gau-  
tama; in Maṇi, the king of Nāgas is my loving trust, also in Vāsuki; in Daṇḍapāda, in ? and in Pūrṇabhadra at all times; in Nanda and Upananda, the beautiful and glorious, who most successfully maintain a contest even with the Gods and Asuras; in Anavatapta, in Varuṇa is my loving trust, and in Saṃhāraka; in Tākshaka, Ananta, and further in Vāsumukha; in Aparājita is my loving trust; and my loving trust is in Chhibbasuta (?); and likewise in Mahāmanasvin perpetually.'

"The language of the manuscript is Sanskrit; not, however, the ordinary standard Sanskrit, but that species of ungrammatical Sanskrit, which formerly used to be known by the name of the Gāthā dialect, and which was the language used for literary purposes by the Northern or North-Western Buddhists, outside the schools of Brahmanic learning, in the centuries immediately before and after the commencement of the Christian era. It was a species of Sanskrit which in inflexion, syntax and metrics was not bound by the ordinary rules and usages of Sanskrit Grammar. The awkwardness of the Sanskrit in the introductory verses is noticeable. The word *adhyāya* is used as being of the neuter gender, while in the standard Sanskrit it is masculine. In the second extract we have *pīshayet* for the regular Sanskrit *peṣayet*, and, in the colophon quoted above it, the wrong concord *valaṃ upajayante* (singular subject with plural predicate). In the third extract, *parihīyate* stands for *parihīyate* and *kāraṇā* is used as the accusative plural, instead of *kāraṇāni*. In the fourth extract, we have the irregular sandhi *devo samantena* for the ordinary Sanskrit *devaḥ samantena*; again the initial *a* of *anavatapta* and of *aparājita* must be dropped or taken as absorbed in the preceding syllable, in order to make the verse (*śloka*) scan; moreover the initial two shorts of

*varuṇena* must be taken to be equivalent to one long, in order to conform the line to the ordinary rules of a śloka; so also in the first half line of the eighth śloka in the first extract, where the two shorts of *subhagá* must be taken as one long. Many more examples of a similar kind might be quoted.

“Now as to the age of the MS., I believe it to be very old and written not later than the end of the 5th century A. D. The style of writing is exactly like that which we meet with in the early Gupta inscriptions, between 450 and 550 A. D. These may best be seen in Mr. Fleet's volume III of the *Corpus Inscriptionum Indicarum*.

“One of the test letters, for the determination of age, of the Nágari alphabet—and the most important one in the present case—is the akshara *ya*. Its original form was **𑂣**; this changed to **𑂤** or **𑂥**; next the left hand loop-line was extended to the point of junction of the perpendicular stroke, **𑂦**. The object of this, of course, was to permit of the letter being written with one continuous movement of the hand. The next step was to dissolve the point of junction, **𑂧**, a natural consequence of quick writing. From this point, the modern form was quickly reached. The whole course of this development is clearly traceable during the period (about 400 to 600 A. D.) of the early Gupta alphabet. The initial forms **𑂤** and **𑂥** we find still used throughout in the Allahabad pillar inscription of Samudra Gupta (about 400 A. D., see Fleet, *ibid.*, p. 6), the Udayagiri Cave inscription of Chandra Gupta II (c. 410 A. D., *ibid.*, p. 35), the Bilsaḍ pillar inscription of Kumára Gupta (415 A. D., *ibid.*, p. 45), the Mathurá image inscription of Skanda Gupta (454 A. D., *ibid.*, p. 263), the Bhitari pillar inscription of Skanda Gupta (c. 460 A. D., *ibid.*, p. 53), the Kahaum pillar inscription of Skanda Gupta (460 A. D., *ibid.*, p. 67), etc. The final form **𑂧** is already used throughout the Bodhgaya inscription of Mahánáman (588 A. D., *ibid.*, p. 274), and in the Asphaḍ stone inscription of Adityasena (c. 650; *ibid.*, p. 202). The intermediate form **𑂨** is only found in the Indor copper plate inscription of Skanda Gupta, of 465 A. D. (*ibid.*, p. 68), the Mandasor stone inscription of Kumára Gupta, of 473 A. D. (*ibid.*, p. 79), the Majhgawan copperplate inscription of Hastin, of 510 A. D. (*ibid.*, p. 106), and the Jaunpur stone inscription of Íśvaravarman of about 520 A. D. (*ibid.*, p. 228). With regard to this intermediate form it is particularly to be noticed, that it occurs side by side with the older forms **𑂤** or **𑂥**, and that it is exclusively used with the vowels *e* and *o*. Thus we have it in the Indore plate in *yojyam* (line 7); again in the Mandasor inscription in *yo* and *priyo* (line 14); again in the Majhgawan plate in *chhreyo* (line 14), *yo* (line 16), *ye* (line 18); again

in the Jaunpur inscription in *anvaváye* (line 2). Now precisely the same practice is noticeable in the main portion of the MS., written in the first variety of the alphabet. The older form is used throughout, except in connection with the vowels *e* and *o*, when the intermediate form is used optionally with the older form. Thus in Plate I, No. I, the intermediate form occurs twice in the 2nd line in *yoga*, and in the 9th line in *kalpayet*. Again in the upper portion of Plate VI of the November Proceedings the intermediate form occurs in the middle of the third line in *lepayet*, and in the beginning of the 6th line in *miśrayet*; also twice in the beginning of the 11th line in *prayojayet*. On the other hand we have the older form in Plate I, No. I, 10th line, *chúrṇayet*, and in Plate VI of the November Proceedings, 2nd line, *kalpayet*; and both the older and intermediate forms we have in the same Plate VI, middle of 6th line, *prayojayet*. Once I have noticed the intermediate form with the analogous case of the vowel *ai*, viz., in Plate VI, middle of 4th line, *jívaníyaiś=cha*. The inscriptions show that this intermediate form was peculiar to a particular period, the limits of which may be roughly put down as between 470 and 530 A. D. It is not found in any inscription either before or after these dates. And as inscriptions longer conserve archaic forms of writing than manuscripts, that fact further proves that the date of writing the MS. must fall somewhere within that period, that is, about 500 A. D. I have not noticed the intermediate form of *ya* either in the second or in the third portion of the MS. In both these portions, the older forms are used exclusively; and as these portions were certainly written after the first portion, they confirm the conclusion, that the writing of the whole MS. cannot be placed later than 500 A. D.

“As tending to confirm this conclusion, it may be further noted that throughout the MS., wherever there is any occasion to use a number, whether in the body of the work in numbering ślokas, or on the margin of the leaves in numbering the latter, the ancient practice of employing numeral letters is exclusively followed, while numeral figures are never used. What is more,—there is no trace of the knowledge of the modern system of notation with the help of the zero and the value of position; every numeral sign has its own fixed value, independent of the position it may occupy in a series, there being separate signs for the units, the tens, hundreds, etc. Thus ‘twenty-five’ is not expressed by the signs for ‘two’ and ‘five’ (*i. e.* 25), placed in a certain order, which order imparts the value of ‘twenty’ to the sign for ‘two;’ but it is expressed by two special signs, one for ‘twenty,’ the other for ‘five.’ That the ‘value of position’ was not known to the writer of the second part of the MS., seems

to be clearly shown by his curious system of numbering the several ślokas of a set. Thus the three ślokas of the *śāpata* set are numbered 443, 434 and 344, which does not mean 'four hundred and forty-three,' 'four hundred and thirty-four,' and 'three hundred and forty-four.' This would have no meaning. The position of the figures in the three series imparts no numerical value; 4 means 'four,' and 3 means 'three,' in whatever position they may be. The three series can only be read 'four four three,' 'four three four' and 'three four four;' and the variation in the position of the three unit figures only serves to enumerate three different ślokas. Now the discoveries of the zero and of the value of position may, with much probability, be placed at some time within the sixth century A. D.; and thus the writing of our MS., must be referred to a time, not later than the beginning of that century, or about 500 A. D.

"This, I believe, makes our MS. the oldest Indian written book that is known to exist. There is indeed another MS. which is nearly as old; that is, the so-called Horiuzi MS., published in the *Anecdota Oxoniensia*, Vol. III. But if I understand the case rightly, that MS. consists only of two leaves, and is preserved, not in India, but in Japan. Professor Bühler, who has described it, assigns to it the date of about 550 A. D. The MSS., next in age, are two Nepalese of the Cambridge collection, *viz.*, Add. 1049 and 1702, described in Mr. Bendall's Catalogue, pp. xxxix ff.; and the so-called Bakhshālī MS., described by myself in the *Indian Antiquary*, Vol. XVII, pp. 33ff. It will be observed that both Nepalese MSS. exhibit throughout the modern form of *ya* (though in slightly differing variations) as it became established at the end of the sixth century A. D. As the Bodhgaya inscription of Mahánáman, of 588 A. D., shows throughout the same form of *ya*, it appears to me not impossible that the MS., Add. 1049, dated Samvat 252, which is referred by Mr. Bendall to 857 A. D., may really be placed in 571 A. D. being dated in terms of the Gupta era. Neither the old, nor the intermediate forms of *ya* occur in the Nepalese MSS., while in our MS. these are the only forms that are employed, the modern form being, conspicuous by its entire absence.

"I may note one or two other peculiarities. In the first place, the oldest form of the long vowel *á* is a small horizontal stroke attached to the top of the right side of a consonant. A peculiar modification of this form is the attachment of the stroke to the middle of the right side. This form has, so far as I am aware, hitherto only been noticed in the Allahabad stone pillar inscription of Samudra Gupta, which dates from about 400 A. D., see Fleet, *Corpus Insc. Ind.* Vol. III., p. 4. Compare, *e. g.*, the *akshara* ग of गङ्ग in line 31 of that inscription with the ग of

नाग in line 4 and of संघाम in line 5 of the lower part of Plate VI in the November Proceedings. I have noticed this peculiar form of á only in the that portion of the MS., which is written in the third variety of the alphabet.

“In the second place a peculiarity of the style of writing of the period of the early Gupta inscriptions is the practice of appending a final consonant, *i. e.*, a consonant without an inherent vowel, below the line in very small size. In fact this practice is the early substitute of the modern *viráma*. Thus compare the very last word पिवेत् in the bottom line, and the word चोरकम् just three lines above it, in the upper portion of the plate in the November Proceedings, again अन्वितम् and नावनीतकम् in line 1, चूर्षयेत् in line 10 of Plate I, No. I, with the word यथावत् in line 11 of the Bilsaḍ pillar inscription of Kumára Gupta, of 415 A. D. (Fleet, p. 44), or ततीयम् at the end of line 11 of the Kahaum stone pillar inscription of Skanda Gupta, of 460 A. D. (*ibid.*, p. 67), or योगम् at the end of line 9 of the Indore copperplate of Skanda Gupta, of 465 A. D. (*ibid.*, p. 70), or मुख्यम् in line 6 of the Gwaliyor inscription of Mihirakula, of about 515 A. D. (*ibid.*, p. 162), or सिद्धम् in line 1, आध्वरान् in l. 13, भूतयेपात् in l. 17 of the Mandasor inscription of Yaśodharman, of 533 A. D. (*ibid.*, p. 152), or गम् in line 1 of the Jaunpur inscription of Íśvaravarman, of about 520 A. D. (*ibid.*, p. 229). This practice of spelling I have observed throughout every part of the manuscript.”

[PS. A fuller account of the MS., and specially of the reasons of dating it so early, I hope shortly to publish.]



No. I.

Handwritten text in an ancient script, likely Sogdian, on a fragment of birch bark. The text is arranged in approximately 10 horizontal lines across the length of the fragment. The script is dense and cursive, with some characters appearing to be ligatures. There are some circular symbols interspersed within the text, possibly serving as markers or decorative elements. The fragment shows signs of age and wear, with some areas appearing darker or more eroded than others.

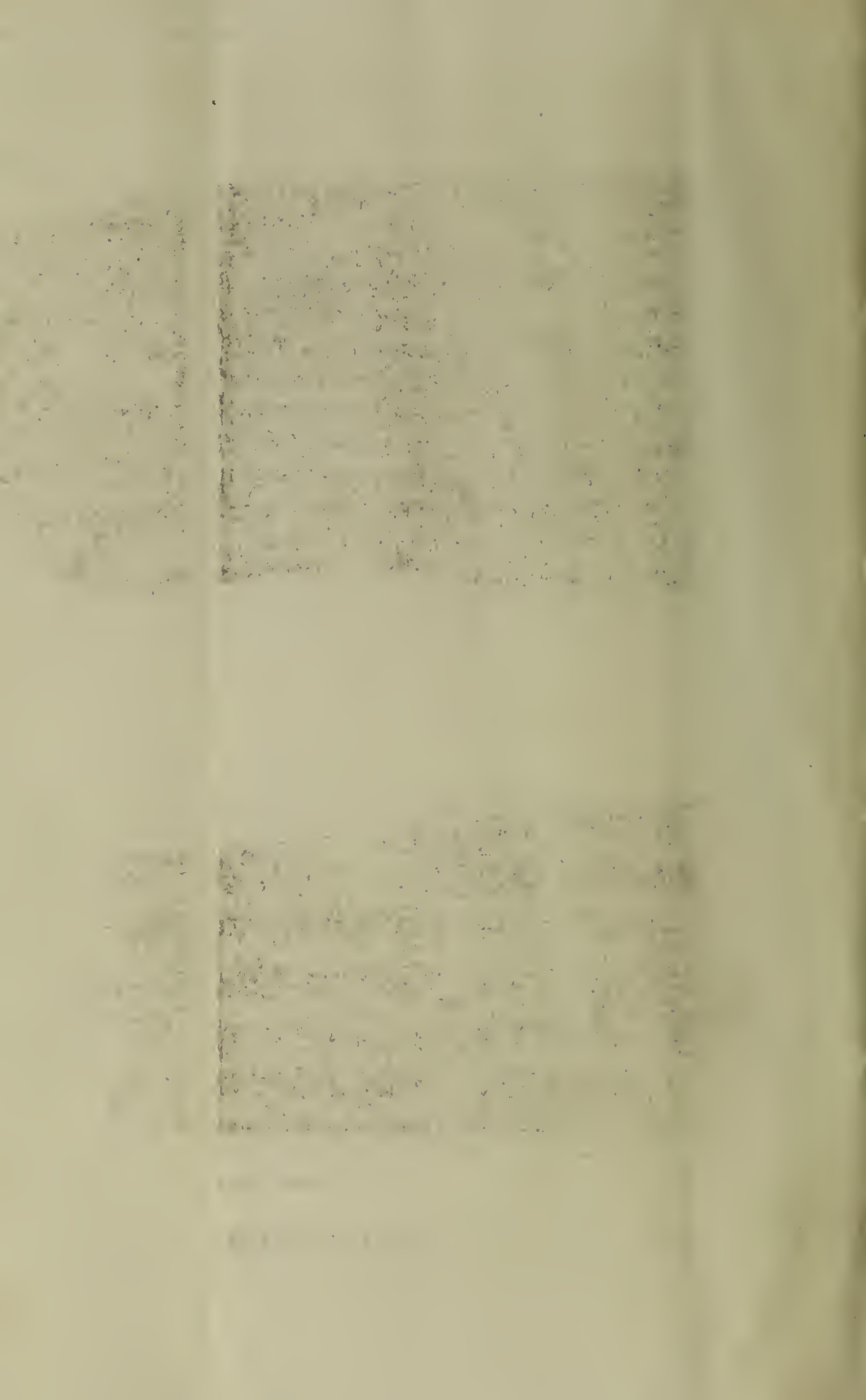
No. II.

Handwritten text in an ancient script, likely Sogdian, on a fragment of birch bark. This fragment is longer than the one above and contains approximately 10 lines of text. The script is consistent with the one in Plate I. The fragment is irregularly shaped, with some missing sections, particularly on the right side. The text is written in a cursive hand, and there are some circular symbols visible. The overall appearance is that of an ancient manuscript fragment.

Photo etching.

S. I. Offices, Calcutta, April 1891.

LEAVES FROM A BIRCH-BARK MANUSCRIPT FOUND IN AN UNDERGROUND ANCIENT CITY NEAR KUCCHAR, EASTERN TURKESTAN.





Handwritten text in an ancient script, likely Sogdian, on a fragment of birch bark. The text is arranged in approximately 10 horizontal lines. The script is dense and cursive, with some characters appearing to be ligatures. The fragment is irregularly shaped and shows signs of wear and tear.

Handwritten text in an ancient script, likely Sogdian, on a fragment of birch bark. This fragment is more rectangular than the one above. The text is arranged in approximately 8 horizontal lines. The script is consistent with the one on the upper fragment, showing a high degree of similarity in character forms and spacing.

Photo-etching.

S. I. Offices, Calcutta, November 1890.

LEAVES FROM A BIRCH-BARK MANUSCRIPT FOUND IN AN UNDERGROUND ANCIENT CITY NEAR KUCHAR, EASTERN TURKESTAN.





